

NEQT 2025



NEQT 2025 Program

Time	October 14	October 15	October 16	October 17
9:00-10:00		Boris Kozinsky (Harvard)	Antoine Georges (Flatiron)	Adrian Feiguin (Northeastern)
10:00-11:00		Adam Foster (Microsoft)	Qimin Yan (Northeastern)	Soonwon Choi (MIT)
11:00-12:00		Coffee Break	Coffee Break	Coffee Break
12:00-13:00		Schuyler Moss (Waterloo) DinhDuy Vu (Harvard) Haoxiang Chen (Peking U)	Shiwei Zhang (Flatiron)	Taylor Patti (Nvidia)
13:00-14:00		Lunch	Lunch	Brenda Rubenstein (Brown)
14:00-15:00	Eun-Ah Kim (Cornell)	Xiao-Liang Qi (Stanford)	Excursion	Lunch
15:00-16:00	Gia-Wei Chern (UVA)	Tess Smidt (MIT)		
16:00-17:00	Coffee Break	Coffee Break		
17:00-18:00	Thomas Schuster (Caltech)	Suman Itani (UNH) Andrew Ma (MIT) Shiyu Zhou (Perimeter)		
18:00-19:30	Jonathan Wurtz (QuEra)	Lightning Talks of Posters		
	Akira Sone (Umass Boston)	Poster Session		
	Wenchao Ge (URI) Max Geier (MIT)			
	Dinner	Banquet	Sips of Science	

Detailed Schedule

Tuesday 10/14	
1:00-1:55	Eun-ah Kim (Cornell) AI for Studying Quantum Matter
2:00-2:40	Gia-Wei Chern (University of Virginia) Machine learning force field approach for large-scale adiabatic dynamics of condensed-matter systems
2:45-3:15	Coffee Break
3:15-4:55	Thomas Schuster (Caltech) Hardness of recognizing phases of matter and distinguishing quantum from classical dynamics
4:00-4:40	Jonathan Wurtz (Quera Computing) AI for neutral atom quantum computing
4:45-5:25	Akira Sone (UMass Boston) Insight of Quantum Communication in Quantum Generative Models
5:30-5:45	Wenchao Ge (URI) Double Quantum-Enhanced Sensing of Displacements with Trapped-ion Crystals
5:45-6:00	Max Geier (MIT) Solving superconductivity with neural quantum states
Wednesday 10/15	
9:00-9:55	Boris Kozinsky (Harvard) Learning physically constrained microscopic interaction models of functional materials
10:00-10:40	Adam Foster (Microsoft) Orbformer: An ab initio foundation model of wavefunctions that accurately describes chemical bond breaking
10:45-11:15	Coffee Break

11:15-11:30	Schuyler Moss (Waterloo) Leveraging recurrence in neural network wavefunctions for large-scale simulations of Heisenberg antiferromagnets
11:30-11:45	DinhDuy Vu (Harvard) Neural quantum state characterization of dynamically prepared quantum spin liquid
11:45-12:00	Haoxiang Chen (Peking University) Neural Network Quantum Monte Carlo Sheds Light on Strongly Correlated Phases with Flat Bands
12:00-1:30	Lunch
1:30-2:25	Xiao-Liang Qi (Stanford) Towards the AI Scientist Era
2:30-3:10	Tess Smidt (MIT) Applications of Euclidean neural networks for the understanding and design of atomistic systems
3:15-3:45	Coffee Break
3:45-4:00	Suman Itani (UNH) Large Language Model Driven Databases for Accelerating Discovery of Functional Materials
4:00-4:15	Andrew Ma (MIT) A data-driven chemical heuristic for electronic topology diagnosis
4:15-4:30	Shiyu Zhou (Perimeter) Noise-strength-adapted approximate quantum codes inspired by machine learning
4:30-5:00	“Lightning Talks” Introduction to Posters
5:00-6:00	Poster Session

6:00-7:00	Banquet Dinner
Thursday 10/16	
9:00-9:55	Antoine Georges (Flatiron) Superconductivity from Fermionic Neural Quantum States
10:00-10:40	Qimin Yan (Northeastern) Learning pathways for solid-state systems: electronic structure and configurational properties
10:45-11:15	Coffee Break
11:15-11:55	Shiwei Zhang (Flatiron) Neural quantum state study of interacting electrons in two-dimensions
12:00-1:30	Lunch
1:30-5:00	Excursion
5:30	<i>Special Event: Sips of Science Mind and Matter - AI and Quantum Computer Durham NH.</i>
Friday 10/17	
9:00-9:40	Adrian Feiguin (Northeastern) Spectral Functions and Thermodynamics with Neural Network Quantum States
9:45-10:25	Soonwon Choi (MIT) Quantum Convolutional Neural Network
10:30-11:00	Coffee Break

11:00-11:40	Taylor Patti (NVidia) Big Data and Smart Models - Accelerated Computing for Quantum Systems
11:45-12:25	Brenda Rubenstein (Brown) Modeling Biology on a Quantum Computer

SEACOAST SIPS OF SCIENCE PRESENTS

Mind and Matter: Integrating AI and Quantum

In partnership with the Northeast Quantum Forum

Thursday, October 16th
Clark's American Bistro,
Durham, NH

Tickets \$10 | Students \$5



Come Learn about how
artificial intelligence
and quantum
technologies are
shaping the future

Featuring Talks From:

Per Berglund
*Professor of Physics and
Astronomy, UNH*

Liang Fu
Professor of Physics, MIT

Brenda Rubenstein
*Professor of Chemistry and
Physics, Brown University*

This event is open to all ages
Reserve your tickets now:
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